AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of the claims.

Claims 1-30. Canceled

31. (New) A recombinant human alpha-glucosidase (rhGAA) or variant thereof, wherein:

a) at least 70% of the rhGAA binds to the cation-independent mannose-6-phosphate receptor through phosphorylated oligosaccharides;

b) the rhGAA has at least 0.7 moles of bis-phosphorylated oligomannose per mole of protein; and

c) the rhGAA has at least 1 molecule of complex oligosaccharide in place of a high-mannose oligosaccharide, wherein the complex oligosaccharide contains galactose, acetylglucosamine and sialic acid, in addition to other sugars.

32. (New) The rhGAA of claim 31, wherein:

d) the uptake of the rhGAA into fibroblast cells has a half-maximal concentration of 10 nM or less.

33. (New) The rhGAA of claim 31, wherein:

e) the uptake of the rhGAA into fibroblast cells does not have a half-maximal concentration of greater than 10 nM.

34. (New) A composition comprising the rhGAA of any one of claims 31 to 33 and a pharmaceutically acceptable carrier, diluent or excipient.

35. (New) A method of treating a deficiency of a lysosomal enzyme comprising administering to a subject in need of the lysosomal enzyme a therapeutically effective amount of the lysosomal enzyme, wherein said lysosomal enzyme deficiency is Pompe disease and the lysosomal enzyme to be administered is the rhGAA of any one of claims 31 to 33.